早產兒臥位對氧合及血液動力學的影響

本研究主要目的在探討早產兒臥位對其氧合及血液動力學的影響及其相關性。研究採類實驗中之重複測量設計,以立意取樣,選取台灣北部某醫學中心新生兒加護病房 32 位早產兒研究對象。依照研究設計監測每一次改變臥位後二十分鐘內心率、呼吸、血氧飽和度及血壓,所得的測量值進行統計分析。研究結果顯示:(1)在心率方面,同床頭高度下各臥位差異心律不具統計意義;同臥姿下,右側臥床頭角度 45 度心率明顯較床頭角度 0 度高;(2)在 呼吸率方面,同床頭角度 45 度時,俯臥之呼吸率時明顯比其他臥位緩,同床頭角度 0 度時各臥姿差異不具統計意義;(3)血氧飽和度方面,俯臥床頭角度 45 度 之血氧飽和度明顯優於其他臥位,右側 0 度與仰臥 45 度血氧飽和度最差;(4)在平均動脈壓方面,同床頭角度各臥位間之差異不具統計意義;同臥位床頭角度 45 度之平均動脈壓明顯比床頭角度 0 度高。因此,俯臥與左側臥比仰臥及右側臥更能獲得較佳血氧飽和度,且較不增加心率與呼吸率者,若再將床頭抬高則可將血氧飽和度提高更多。本研究結果可提供新生兒加護病房,作爲照護早產兒,改變臥位時的指引,在個案病情考量下,提供適當適切的臥位及調整床頭角度,使早產兒氧合及血液動力學更趨於穩定狀態,減少合併症的發生,提高護理品質。

The purpose of this research was designed to investigate the impact of body posture on oxygenation and hemodynamic status of premature babies. A sampling of 32 premature babies with PCA of 30~36 weeks was taken after informed consents were obtained from their parents. Each subject was put in prone, right lateral, supine, and left lateral position with head of bed (HOB) 45 degrees and 0 degree for at least 20 minutes. Heart rates, respiratory rates, peripheral pulse oxymeter values, and blood pressure were taken cach minute for the first 20 minutes. Data were processed mainly with repeated measures ANOVA and paired t-test. The results indicated that: 1). At the same HOB, there were no significant difference between the HRs of the four postures. In same position, the HR in right lateral position with HOB of 45 was significantly higher than the ones with HOB of 0; 2). At the HOB of 45, the RRs of prone position was significantly less than the ones in other positions. There was no significant difference between the RRS of the four postures at HOB of 0; 3). The SpO2 values in prone position with HOB of 45 were the highest among all. The SpO2 values were poor at right position with HOB of 0 and supine position with HOB of 45; 4). At same HOB, there were no significant difference between the MBPs of the four postures. In same position, the MBP values were higher in HOB of 45 than the ones in HOB of 0. Prone and left lateral positions result in better SpO2 values with less increment of HR and RR, and an elevation of HOB 45 can help to raise the SpO2 values. The findings of this study provides references in caring premature neonate in choosing and changing position.